

**Listing of Claims**

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-38 (canceled).

39. (currently amended) A bulk crystal substrate of GaN, comprising:  
a slab of GaN single crystal having a substantially uniform composition of GaN in a thickness direction of said slab, said slab having a defect density lower than about  $[10^{-3} \text{ cm}^{-3}]$   $\underline{10^3 \text{ cm}^{-2}}$ .

40. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a thickness exceeding about 100  $\mu\text{m}$ .

41. (original) A bulk crystal substrate of GaN as claimed in claim 39 wherein said slab has a thickness exceeding about 300  $\mu\text{m}$ .

42. (currently amended) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a defect density lower than about  $[10^{-2} \text{ cm}^{-3}]$   $\underline{10^2 \text{ cm}^{-2}}$ .

43. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab is formed of GaN of a hexagonal crystal system.

44. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab is formed of GaN of a cubic crystal system.

Claims 45-77 (canceled).

78. (new) The bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a thickness exceeding 10  $\mu\text{m}$ .

79. (new) The bulk crystal substrate of GaN as claimed in claim 39, wherein a cathode luminescent spectrum of said slab of GaN single crystal has no more than one peak.

80. (new) A bulk crystal substrate of GaN comprising a slab of GaN single crystal having a substantially uniform composition of GaN in a thickness direction of said slab, having a defect density lower than  $10^3 \text{ cm}^{-2}$ , and having a thickness exceeding  $10 \mu\text{m}$ .

81. (new) The bulk crystal substrate of GaN as claimed in claim 80, wherein said slab has a thickness exceeding  $100 \mu\text{m}$ .

82. (new) The bulk crystal substrate of GaN as claimed in claim 80, wherein said slab has a defect density lower than  $10^2 \text{ cm}^{-2}$ .

83. (new) An optical semiconductor device comprising said bulk crystal substrate of GaN as claimed in claim 80.

84. (new) The optical semiconductor device of claim 83, wherein said optical semiconductor device includes a laser diode.

85. (new) The optical semiconductor device of claim 83, wherein said optical semiconductor device includes a light-emitting device.

86. (new) An electron device comprising said bulk crystal substrate of GaN as claimed in claim 80.